

REMARKS

This paper is filed in response to the Office Action mailed 2nd June 2009. Claims 1-6, 10-14, 16-18, and 20-24 were pending in the application. Of the above claims 13, 14, 16-18 and 20 are withdrawn from consideration. Claims 1, 10, 14, 16 and 21 have been amended. Therefore, claims 1-6, 10-12 and 21-24 are submitted for reconsideration.

Claim Amendments

Claims 1, 10, 14, 16 and 21 have been amended to include specific reference to the adhesive heat seal layer. Basis for this amendment is to be found on page 13 from line 33 to page 14, line 3 of the PCT publication. No matter is added by such amendment.

Rejection of Claims 1-6, 10, 11, 21, 23 and 24

Claims 1-6, 10, 11, 21, 23 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Yasutake et al. in combination with Lamich.

In response to these rejections, claim 1 has been amended to explicitly require that the heat seal layer is an adhesive.

The Examiner has indicated that Yasutake discloses a heat exchanger construction having plates formed of a clad brazing sheet that permits furnace brazing. Applicant is of the opinion that such furnace braising is not what is generally understood by the person of ordinary skill as a "heat seal layer". On the basis of the present amendment, the reference to an adhesive heat seal layer is believed to clearly and unambiguously distinguish the present invention over Yasutake.

Lamich also describes a heat exchanger construction in which brazing is used to bond various sections together (see column 2, line 17 to line 22). A combination of the teachings of Lamich with those of Yasutake would thus still fail to meet all of the integers of claim 1, in particular the presence of an adhesive heat seal layer.

The Examiner has not presently indicated any citation that provides teaching that would lead the person of ordinary skill to adapt either Yasutake or Lamich in order to use an adhesive layer instead of the described brazing materials.

According to the present invention as defined in claim 1, an adhesive connection is used between a laminate and a plurality of fins. The fins serve to increase the effective surface area of the laminate and are connected in heat conducting relationship therewith. Such connections where heat conduction is required have in the past been performed using

welding, soldering or brazing techniques. Claim 1 also requires a further connection between the laminate and itself or a similar laminate in order to form a flow channel. This connection is also provided using a heat seal adhesive. It is respectfully submitted that nothing in the art of record teaches or suggests the use of adhesives to perform both a sealing function and to attach heat transfer elements in heat conducting relation to a heat exchange laminate.

The Examiner has previously suggested as trivial, the additional limitation of the claim by which a water-retaining layer is provided on the fins. It is however observed that the presence of such a layer on the fins is indicative of the fact that the heat-exchange into the medium takes place at this point in the heat exchanger. The latent heat of evaporation (which is the most significant part of the heat transfer) must therefore be conducted from the fin to, and through, the laminate. This distinguishes the present heat-conducting seal between fin and laminate from other purely mechanical connections that may be provided e.g. to secure a spacer.

For the above reasons, the Examiner is respectfully requested to reconsider the rejection of claim 1.

Claims 2-6, 10-13 and 24 depend from claim 1 and are thus patentable on that basis.

Claim 21 is novel and inventive over the art of record for the same reasons as given above in relation to claim 1.

Claims 22, and 23 depend from claim 21 and are thus patentable on that basis.

Rejoinder of claims 14, 16-18 and 20

Claim 14 also explicitly relies upon the same features as claim 1, in particular, the sealing under heat and pressure of a heat-sealable adhesive layer to join fins to a laminate. For this reason, rejoinder is believed to be appropriate.

In view of the above, Applicant respectfully requests entry and allowance of claims 1-6, 10-14, 16-18, and 20-24 by the Examiner.

Extension of Time

Any extension of time that may be deemed necessary to further the prosecution of this application is hereby requested.

Authorization to Charge Fees

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 08-3038, referencing the docket number shown above.

Authorization to Communicate via email

Pursuant to MPEP 502.03, authorization is hereby given to the USPTO to communicate with Applicant's representative concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file. Applicant's representative, David P. Owen, can be reached at email address owend@howrey.com.

The Examiner may also contact the undersigned by telephone at the number given below in order to resolve any questions (note, this telephone number is an Amsterdam phone number, Amsterdam time is 6 hours ahead of US east coast time).

Respectfully submitted,

/david p owen/

David P. Owen
Reg. No. 43,344

Date: 2 November 2009

Customer No. 32,894
Howrey LLP
2941 Fairview Park Drive, Suite 200
Falls Church, VA 22042
Fax: 202 383-7195
Tel: 9-011-31-20-592-4411